

ABSTRACT OF THE DISCLOSURE

An optical communication system according to the invention comprises: a transmitting station 11; an optical transmission line 12 for transmitting an optical signal sent from the transmitting station 11; a receiving station 13 for receiving the optical signal
5 outputted from the optical transmission line 12; a repeater station 14 provided at one point or more in the optical transmission line 12; and pump light sources 21 provided in at least two of the stations 11, 13, 14, for supplying pump light to the optical transmission line 12, wherein the pump light has two types or more of wavelength. It is possible to obtain a substantially flat gain as a function of wavelength in the whole optical communication system
10 since the pump lights with different wavelengths are supplied from a plurality of points in the optical transmission line 12 and an optical signal is amplified with various Raman gain coefficients.